ADMIRALTY SIGNAL ESTABLISHMENT

VALVE ELECTRONIC **CV1257**
(MT100)

Specification AD/CV1257/Issue 5.
Dated 17.7.47.
To be read in conjunction with K1001, ignoring clauses:- 5.2; 5.3; 5.8.

SECURITY	
Specn.	Valve
Restricted	Unclassified

TYPE OF VALVE:- Air-cooled modulator tetrode.
CATHODE:- Indirectly heated, oxide coated.
ENVELOPE:- Metal glass.
PROTOTYPE:- E.1155.

MARKING
See K1001/4.

BASE
T4.
See K1001/AIV/D7.

Pin	Electrode
1	Grid
2	Heater
3	Grid
4	Heater and Cathode

DIMENSIONS AND CONNECTIONS
See page 2, Fig.3.

PACKAGING
See K1005.

RATING			Note
Heater Voltage	(V)	8.0	A
Heater Current	(A)	6	
Max. Screen Voltage	(kV)	2	
Max. Anode Voltage	(kV)	12	
Max. Anode Dissipation	(W)	60	
Max. Screen Dissipation	(W)	10	
CAPACITANCES (pF, Approx.)			
Ca - all		7.4 to 11.1	B
Cg - all		20.0 to 33.0	B
Cag		1.0	B

NOTES

A. The filament volts should always be run up slowly, and not switched on fully at once.
B. Checked at Type Approval.

TESTS

To be performed in addition to those applicable in K1001.

	Test Conditions						Test	Limits		No Tested	Notes
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)	Ia+Ig2 (mA)		Min.	Max.		
a	8.5		=Vg1	Adjusted	1		Anode hot flash process.			100%	1
	V (See Fig.1.) raised slowly to 13 kV and maintained there until flashing substantially ceases.										
b	8.5		=Va	Adjusted		2	Grid hot flash process.			100%	1
	V (See Fig.1.) raised slowly to 13 kV and maintained there until flashing substantially ceases.										
c	8.0						Ih (A)	5.45	6.65	100%	
d	8.0	400		Adjusted		150	-Ig1 total after 5 mins. (uA)		150	100%	
e	8.0	Adjusted = x (say)		-80		100	"Amplification factor" $\frac{X-Y}{80}$	3.5	5.5	100%	
	8.0	Adjusted = y (say)		0		100					

TESTS (CONTD.)

	Test Conditions						Test	Limits		No. Tested	Notes
	Vh (V)	Va (V)	Vg2 (V)	Vg1 (V)	Ia (mA)	Ia+Ig2 (mA)		Min.	Max.		
f	800	12000	2000		1		Cut-off -Vg1 (V)	-	1,100	-	
	To apply only to valves whose factor in 'e' is less than 4.5.										
g	8.0	3000	=Va	0			Peak (Ia+Ig2) current. (A)	12	-	100%	2
	Peak Ia+Ig2 current measured.										

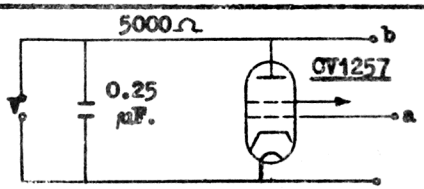


FIG.1.

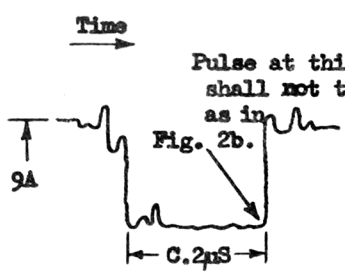
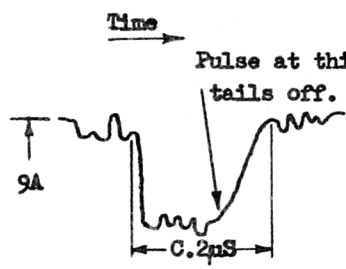
Connect Vg2 to "a" for test "a"

Connect Vg2 to "b" for test "b"

NOTES

1. Processes "a" and "b" need be applied once only to each valve.
2. (a) Peak (Ia+Ig2) to be measured with Tp = 2 µS, PRF = 50 p/s, the pulse shape to be sinusoidal.
   (b) Test "g" may be considered satisfied provided the following operational test is passed. In all cases of doubt test "g" shall be the deciding test:-

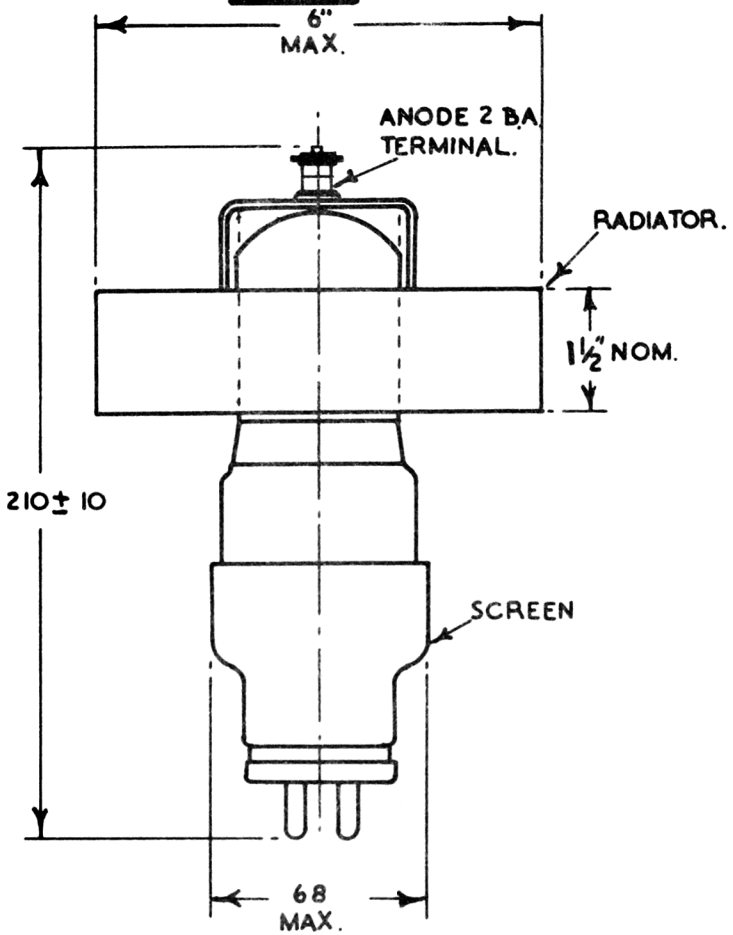
The test shall be carried out in an approved transmitter of the 271 type replacing the MT98 by a non-inductive 1000-ohm resistance. The peak current through this resistor is to be adjusted to 9-A, measured by means of the 5-ohm non-inductive monitoring resistance in the transmitter box. The shape of the pulse must be sensibly square (see Figs. 2a and 2b) and there must be no continued flashing.

FIG. 2a	FIG. 2b
ACCEPT	REJECT
	

Max. time of fall from 8 A to zero: ¼ µS.

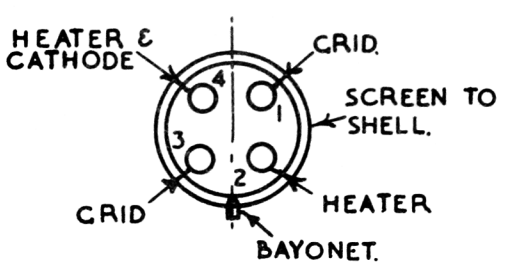
OUTLINE DIMENSIONS & CONNECTIONS. CV1257

FIG. 3.



VIEW OF BASE.

SHOWING CONNECTIONS.



ALL DIMENSIONS ARE IN MILLIMETRES EXCEPT WHERE OTHERWISE STATED.